10 Fixes For High Memory Usage Windows 10 Issue

October 30, 2021



Are you tired of facing these problems:

- Slow computer running speed
- Unresponsive applications/programs
- Hanged file transfer operation
- Can't download or upload files or programs
- Computer "high memory usage" warning

Don't worry, you can find your answers to these problems. Just keep reading the article and you can easily fix the problems you are facing on your Windows 10/8/7.

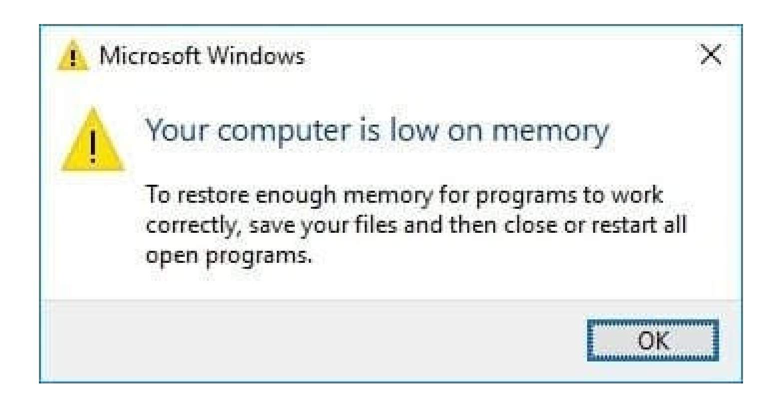


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What Is Computer Memory?

Computer Memory is a general term used to describe all available types of data storage technology used by a computer. Some examples of these data storage devices or techs are **RAM, ROM, HDDs, Flash storage,** etc.

Memory can be divided into categories based on the speed of data reading/writing, size of the data storage, and time for which the data can be retained. Another way to differentiate memory is based on the time period for which the data can be retained. It can be divided into Volatile and Non-volatile memory types.

Volatile memory is fast in reading and writing speed but it will lose the stored data when the power is switched off. Non-volatile memory, by contrast, has a significantly lower speed of access to the stored data and it will not lose the data when power is switched off.

A computer is made up of a combination of these two types of memory and the exact configuration can be based on the user's preference. Either the computer gig can be optimized for faster data processing speed or at minimum cost per gigabyte of memory/disk space.

What are the different types of Memory?

Memory can be categorized into two basic types- Primary Memory and Secondary Memory.

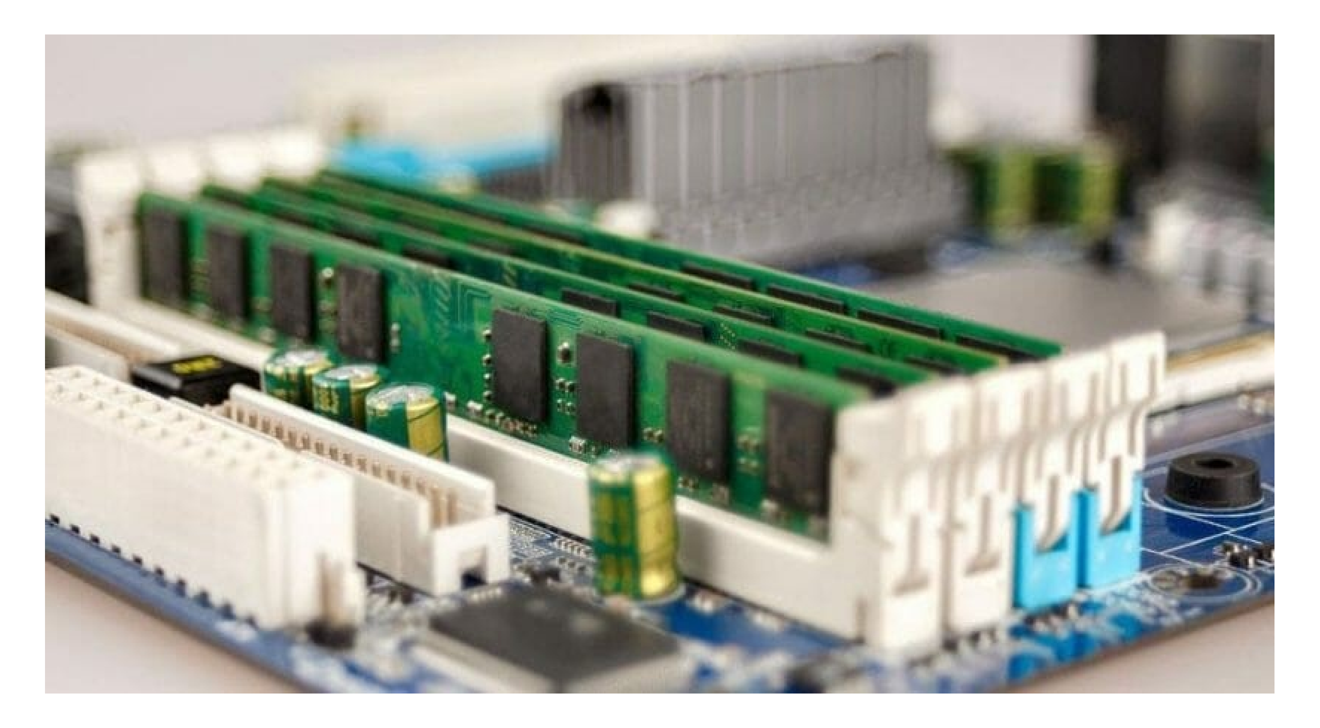
Primary Memory

Primary Memory also called System Memory is physically located near the CPU of a Motherboard. It stores the data that the CPU needs imminently and can access the data very quickly(Note- Virtual memory works as a primary memory although its physical location is in a secondary memory device- HDD/SSD).

Primary Memory can be of two key types:

1. **RAM, or Random access memory.**
2. **ROM, or Read-only memory.**

1. Primary Memory- RAM.



RAM or Random Access Memory stores the data that is required by the CPU to process imminently. As the name suggests, the data stored in RAM can be accessed in any random order. In simple terms, you can access any random bit of data as quickly as any other bit.

The most important key point about RAM is that it can be accessed very quickly, read & write data and it is volatile(data will be lost when the power is switched off).

Types of RAM

1. **DRAM**, or Dynamic RAM
2. **SRAM**, or Static RAM
3. **Primary memory**– ROM



ROM or Read-only Memory as the name suggests can be accessed to read the stored data, data cannot be written in it. It is accessed very quickly and located near to the CPU on the motherboard.ROM is a non-volatile type of memory. In that sense, it can be categorized into secondary memory where data is stored for a long period of time.

The ROM usually contains boot information also known as "**bootstrap code**". It is a basic code of instructions that a computer is required to execute so that it can be aware of the presence of the Operating System in the secondary memory, and to load some of the essential information into the RAM primary memory so that the computer is ready for use.

Types of ROM:

1. **PROM**, or Programmable Read-Only Memory.
2. **EPROM**, or Erasable Programmable Read-Only Memory.
3. **EEPROM**, or Electrically Erasable Programmable Read-Only Memory.

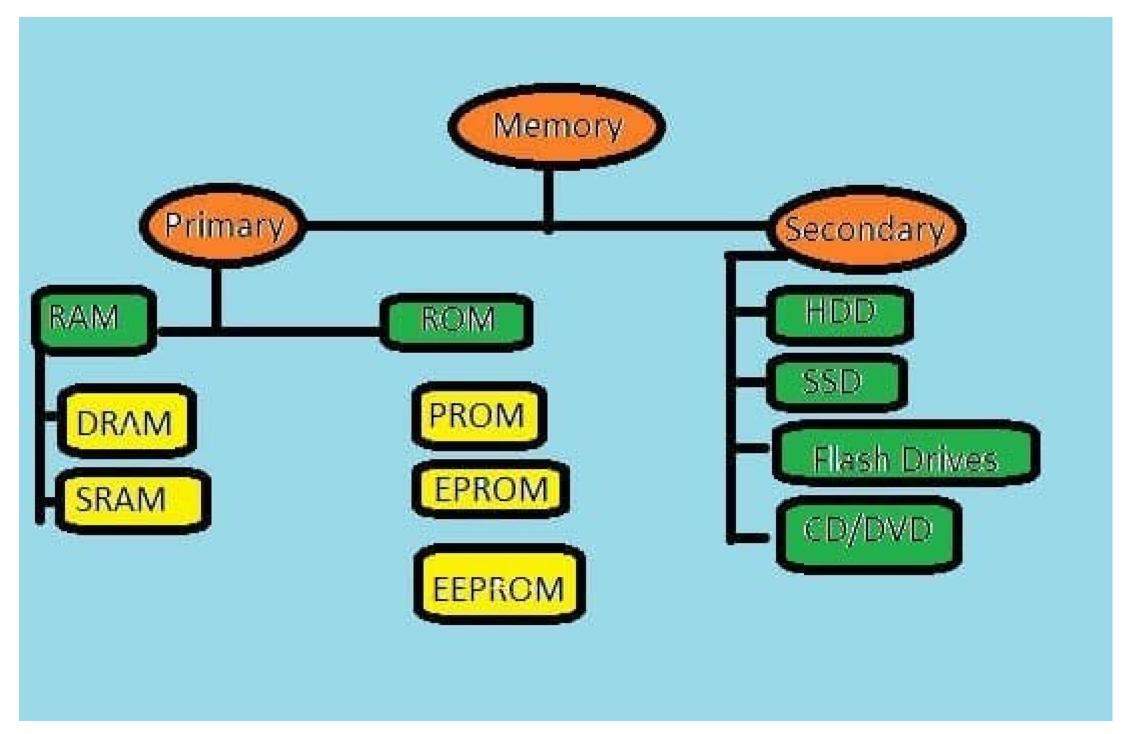
See also 12 Fixes For Windows 10 Update Stuck on Checking for Updates Issue

Secondary Memory

Secondary Memory, also called Storage, is physically located in external storage devices such as the Hard Disk Drives(HDDs) and Solid State Drives(SSDs). Usually, the cost per gigabyte for this type of memory is significantly lower and is capable of storing large amounts of data. But the speed of access or read/write speed is slower compared to Primary Memory.

Types and examples of Secondary memory:

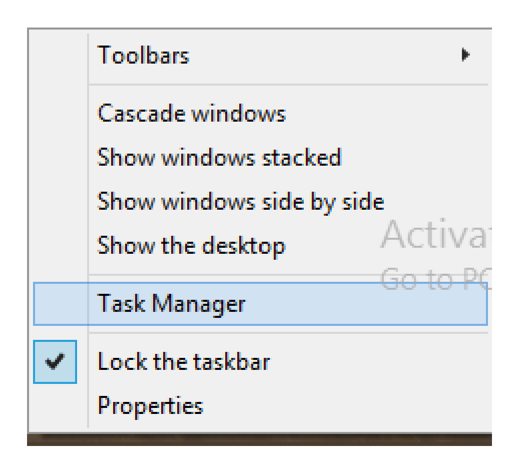
- **HDDs**
- **SSDs**
- **Optical Drives such as CDs and DVDs**
- **Flash Storage Devices such as Pen Drives, SD Memory Card**
- **Storage arrays such as 3D NAND flash arrays**



How To Check "High Memory Usage Windows 10"?

You can check the memory usage of your Windows 10 computer using the Task Manager. Follow the below written steps.

Step 1- Right-click on the Taskbar and click on the Task Manager option, or you can press "**CTRL + SHIFT + ESC**" on the keyboard.



Step 2- Under the Processes tab, you can see the usage percentage of CPU, Memory, Disk and Network.

File Options View

Processes | Performance | App history | Startup | Users | Details | Services

Name	Status	5% CPU	59% Memory	2% Disk	0% Network
igfxCUIService Module		0%	1.0 MB	0 MB/s	0 Mbps
Google Chrome		0%	1.0 MB	0 MB/s	0 Mbps
PDF Architect 5		0%	0.9 MB	0 MB/s	0 Mbps
NVIDIA Web Helper Service (32 ...		0%	0.6 MB	0 MB/s	0 Mbps

Here you can observe the status of the memory usage of your computer. It is usually shown in percentage data. If the percentage in the memory usage column is shown as 80%, 90% or 99%, then it is a "**High memory usage**" issue.

What Are The Factors Responsible For 'High Memory Usage Windows 10'?

Here's a list of different factors that can lead to 'High memory usage' error:

1. Simultaneously running too many apps or programs.
2. Unnecessary Startup programs.
3. Low Virtual memory/Physical memory size (small RAM space will not support some popular programs and games).
4. Virus or malware infection.
5. Registry hack.
6. Disk file system error.
7. "Memory leak" caused by programs such as Google Chrome, Adobe Photoshop, etc.

10 Ways To Fix 'High Memory Usage Windows 10' Error

- **Close Unnecessary Running Applications Or Programs On Task Manager**
- **Disable Some Of The Startup Programs On Your Windows 10**
- **Defragment Hard Drive & Adjust For Best Performance**
- **Fix Disk File System Error Using "Advanced System Settings"**
- **Increase/Release Virtual Memory On Windows 10**
- **Disable Superfetch Service On Windows 10**
- **Set Registry Hack On Windows 10**
- **Increase Physical Memory On Windows 10**
- **Disable Ndu In Registry On Windows 10**
- **Clean Up Virus On Your Windows 10**

Method 1- Close Unnecessary Running Applications Or Programs On Task Manager

To fix the issue of 'High Memory Usage' on your windows 10 computer, try to close unnecessary programs that are currently running. Also closing unnecessary programs can avoid memory leak issues. You can try to follow the steps written below to fix the issue using this method.

Step 1- Press "**CTRL + SHIFT + ESC**" to open the Task Manager on your Windows 10 or you can also right-click on the Taskbar and select the Task Manager option.

File Options View

Processes | Performance | App history | Startup | Users | Details | Services

Name	Status	5% CPU	59% Memory	2% Disk	0% Network
igfxCUIService Module		0%	1.0 MB	0 MB/s	0 Mbps
Google Chrome		0%	1.0 MB	0 MB/s	0 Mbps
PDF Architect 5		0%	0.9 MB	0 MB/s	0 Mbps
NVIDIA Web Helper Service (32 ...		0%	0.6 MB	0 MB/s	0 Mbps
Intel(R) Dynamic Platform and ...		0%	0.6 MB	0 MB/s	0 Mbps
PassThruSvr Application (32 bit)		0%	0.5 MB	0 MB/s	0 Mbps
Windows Logon Application		0%	0.5 MB	0 MB/s	0 Mbps
Intel(R) Dynamic Platform and ...		0%	0.5 MB	0 MB/s	0 Mbps
Adobe Acrobat Update Service (...		0%	0.5 MB	0 MB/s	0 Mbps
PnkBstrA (32 bit)		0%	0.5 MB	0 MB/s	0 Mbps
Device Association Framework ...		0%	0.5 MB	0 MB/s	0 Mbps
Windows Start-Up Application		0%	0.4 MB	0 MB/s	0 Mbps
Realtek HD Audio Manager		0%	0.3 MB	0 MB/s	0 Mbps
System		0.3%	0.3 MB	0.1 MB/s	0 Mbps
HD Audio Background Process		0%	0.2 MB	0 MB/s	0 Mbps
Windows Session Manager		0%	0.1 MB	0 MB/s	0 Mbps
Google Crash Handler (32 bit)		0%	0.1 MB	0 MB/s	0 Mbps
Google Crash Handler		0%	0.1 MB	0 MB/s	0 Mbps
Console Window Host		0%	0.1 MB	0 MB/s	0 Mbps
System interrupts		0.2%	0 MB	0 MB/s	0 Mbps

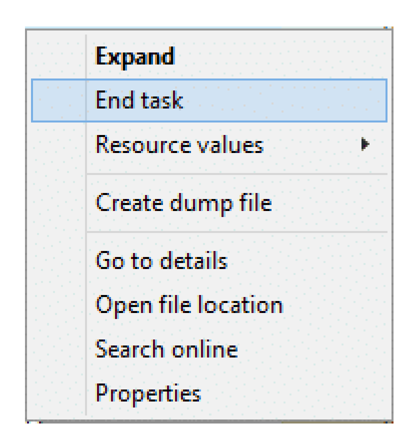
Fewer details

Step 2- On the first **"Processes"** tab, you can find the running programs that are using a bulk of your system memory.

Name	Status	3% CPU	74% Memory
Antimalware Service Executable		0%	367.1 MB
Google Chrome		0%	189.0 MB
Google Chrome		0%	156.8 MB
Google Chrome (2)		0.2%	126.2 MB
Google Chrome		0%	123.1 MB
Google Chrome		0%	116.0 MB
Google Chrome		0%	81.8 MB
Google Chrome		0%	78.6 MB
Adobe Photoshop (32 bit)		0%	76.5 MB
Google Chrome		0%	71.3 MB
Service Host: Local System (Net...		0.6%	56.4 MB
Google Chrome		0%	50.4 MB
Windows Explorer (3)		0%	37.0 MB

Step 3- Select the ones that you find unnecessary and click on the "**End Task**" button on the right bottom corner of the Task Manager window.

Using this method to close unnecessary programs you can easily reduce the pressure of high memory usage.

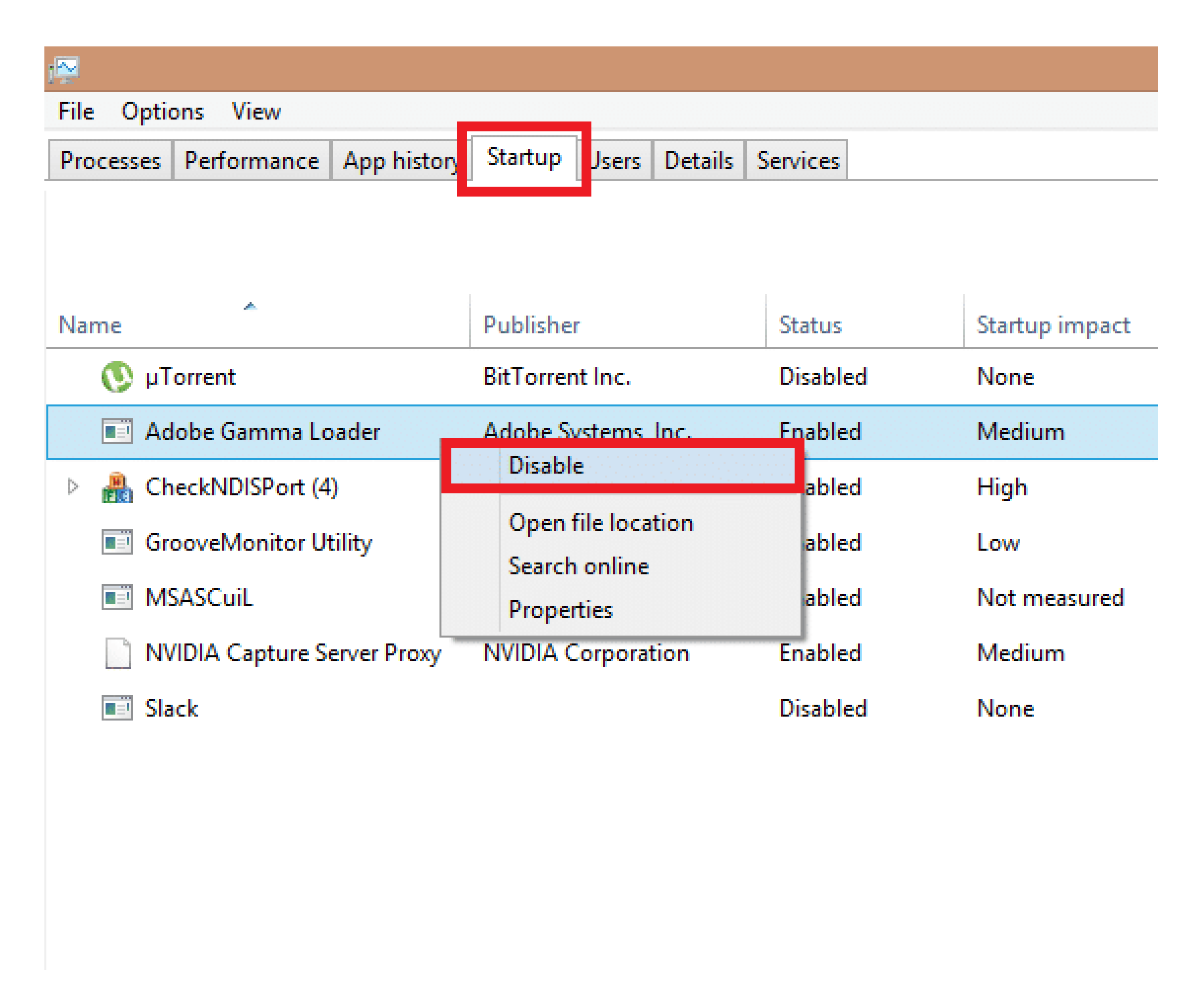


Method 2- Disable Some Of The Startup Programs On Your Windows 10

Disabling some of your system's Startup Programs will reduce the high CPU usage and effectively lower the percentage of memory usage, alleviate "memory leak" and subsequently ease your computer's high memory usage pressure.

Step 1- Open the Task Manager on your Windows 10 computer.

Step 2- Go to the "**Startup**" tab, select the programs that are not required to run from the system startup and press the "**Disable**" button on the right-bottom corner of the Task Manager window.

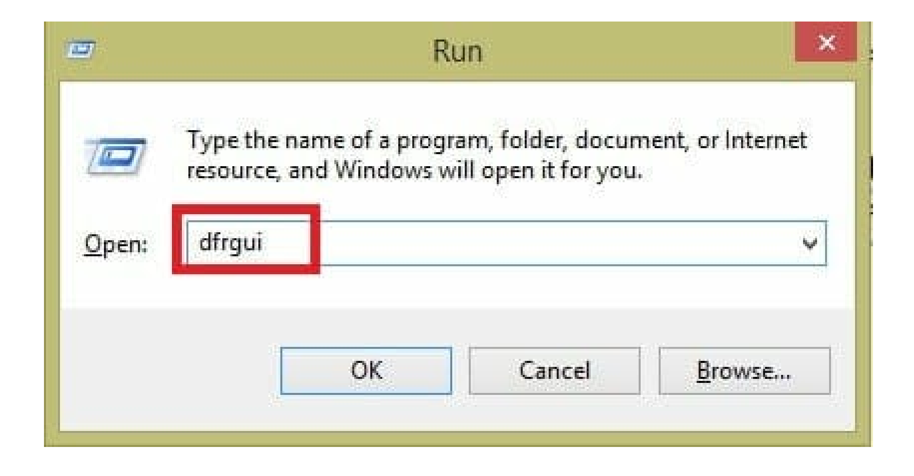


Method 3- Defragment Hard Drive & Adjust For Best Performance

Defragging a Hard Disk is essentially rearranging/reorganizing the disordered pieces of information into orderly unbroken sequence blocks of file information. This makes the system more efficient in memory usage and concurrently reduces the pressure of high memory usage in your computer.

Defragging the Hard Drives on Windows 10:

Step 1– Press Windows + R to open the Run dialog, type in "**Dfrgui**" and hit Enter.



Step 2– Click on the Hard drive that you want to defrag, and click "**Optimize**".

Optimize Drives

You can optimize your drives to help your computer run more efficiently, or analyze them to find out if they need to be optimized. Only drives on or connected to your computer are shown.

Status

Drive	Media type	Last run	Current status
(C:)	Hard disk drive	09-08-2021 19:47	OK (4% fragmented)
VOL 1 (D:)	Hard disk drive	30-07-2021 13:53	OK (0% fragmented)
VOL 2 (F:)	Hard disk drive	30-07-2021 13:53	OK (0% fragmented)
Recovery	Hard disk drive	30-07-2021 13:55	OK (0% fragmented)

Analyze Optimize

Scheduled optimization

On

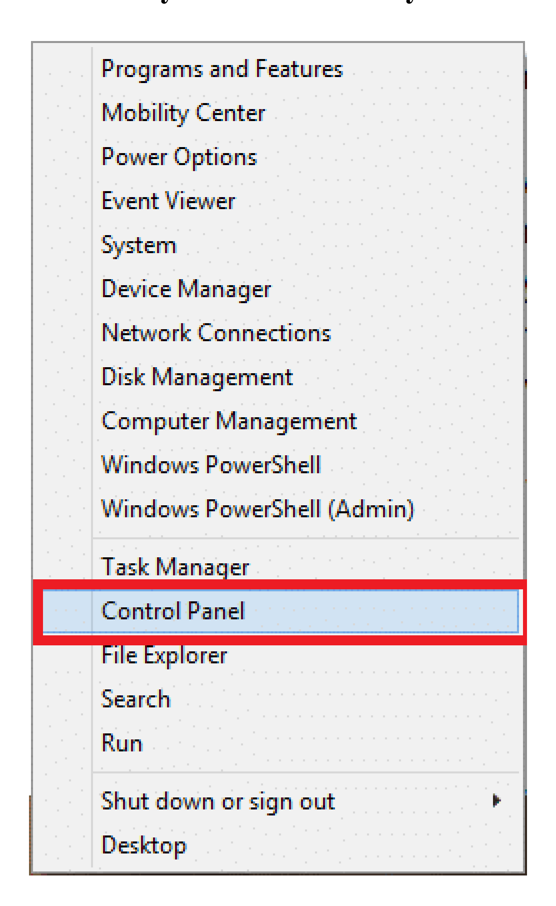
Drives are being optimized automatically.

Frequency: Weekly

Change settings

Close

Another way to open the "**Defragment & Optimize Drives"** program, navigate to **Control Panel-> System and Security-> Administrative Tools-> Defragment & Optimize Drives.**



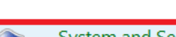
Control Panel



Control Panel

Adjust your computer's settings

View by: Category





System and Security
Review your computer's status
Save backup copies of your files with File History
Find and fix problems



Network and Internet
View network status and tasks
Choose homegroup and sharing options



Hardware and Sound
View devices and printers
Add a device
Adjust commonly used mobility settings



Programs
Uninstall a program



User Accounts and Family Safety
Change account type
Set up Family Safety for any user



Appearance and Personalization
Change the theme
Change desktop background
Adjust screen resolution

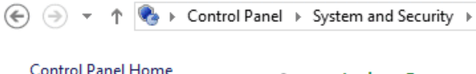


Clock, Language, and Region
Add a language
Change input methods
Change date, time, or number formats



Ease of Access
Let Windows suggest settings
Optimize visual display

System and Security



Control Panel › System and Security ›

Control Panel Home

- **System and Security**

Network and Internet
Hardware and Sound
Programs
User Accounts and Family Safety
Appearance and Personalization
Clock, Language, and Region
Ease of Access



Action Center
Review your computer's status and resolve issues | Change User Account Control settings |
Troubleshoot common computer problems



Windows Firewall
Check firewall status | Allow an app through Windows Firewall





System
View amount of RAM and processor speed | Allow remote access | Launch remote assistance |
See the name of this computer



Windows Update
Turn automatic updating on or off | Check for updates | Install optional updates | View update history



Power Options
Change battery settings | Require a password when the computer wakes |
Change what the power buttons do | Change when the computer sleeps



File History
Save backup copies of your files with File History | Restore your files with File History



BitLocker Drive Encryption
Manage BitLocker



Storage Spaces
Manage Storage Spaces



Work Folders
Manage Work Folders

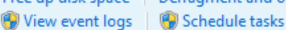


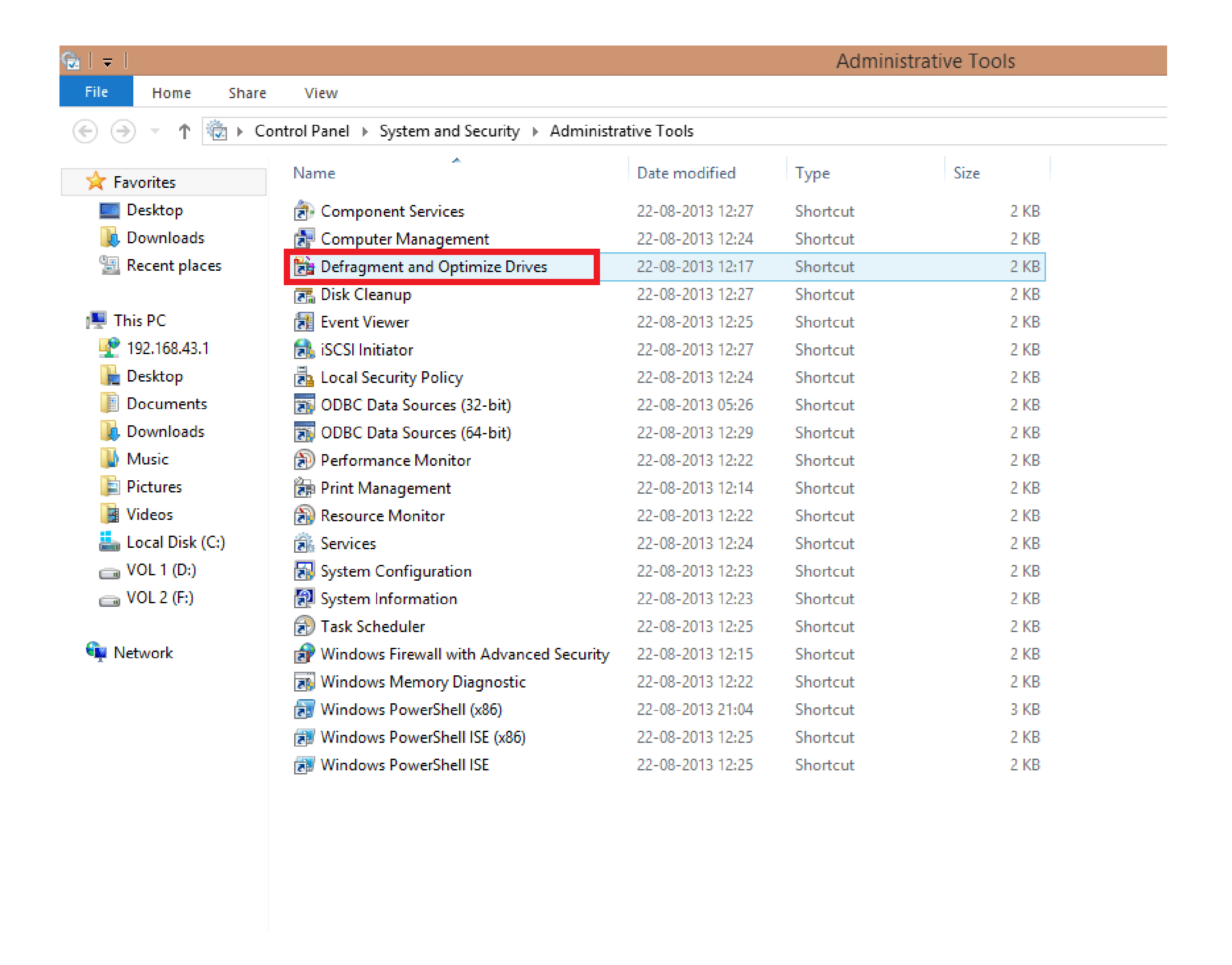


Add features to Windows 8.1
Get more features with a new edition of Windows



Administrative Tools
Free up disk space | Defragment and optimize your drives | Create and format hard disk partitions |
View event logs | Schedule tasks



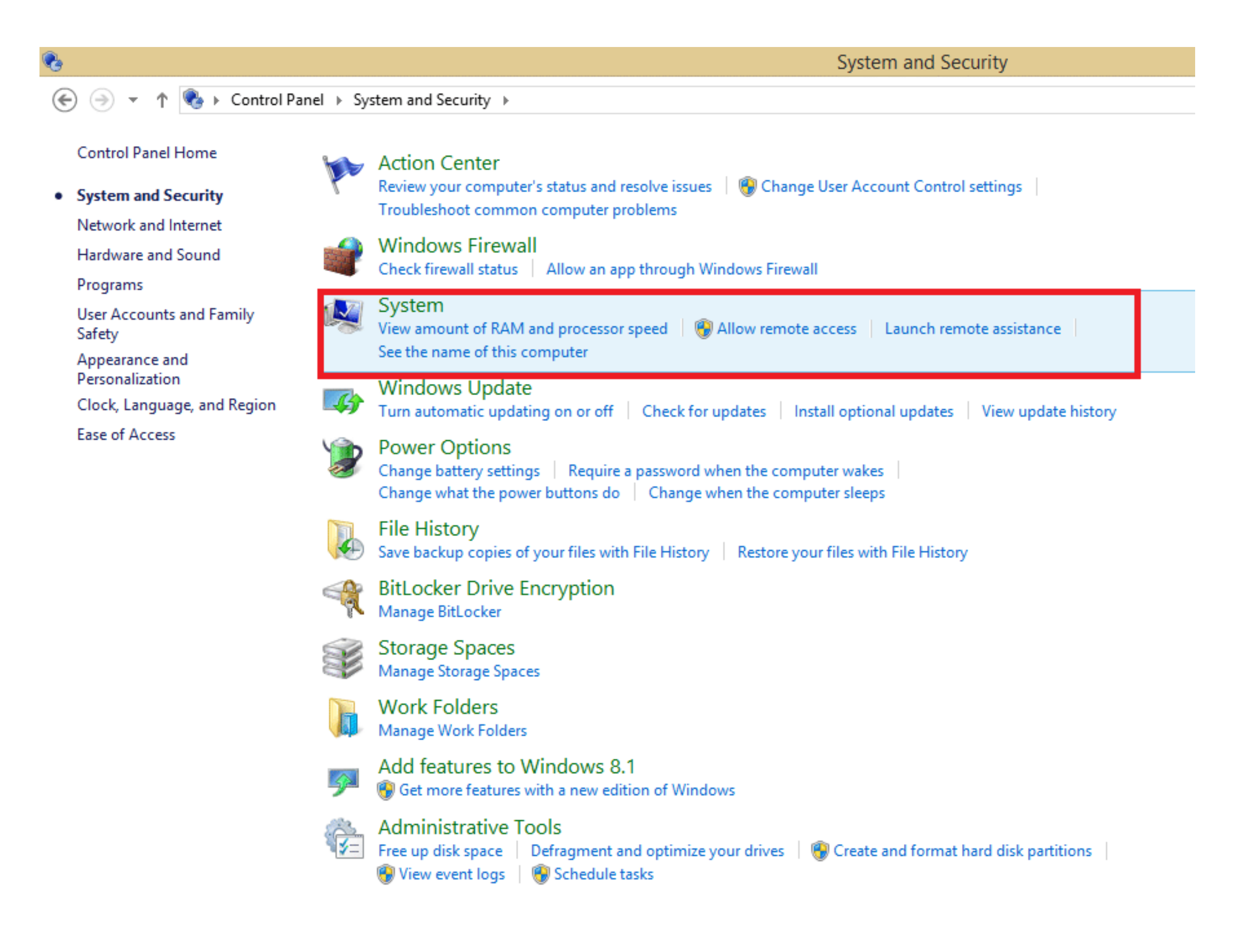


Note- Windows **10/8/7/Vista** comes with an in-built Hard Drive Defragmenting utility which defrags the system hard drives periodically. Unless you want to change the time of the automatic defragmentation or if you want to manually defrag then you can follow the above-written steps.

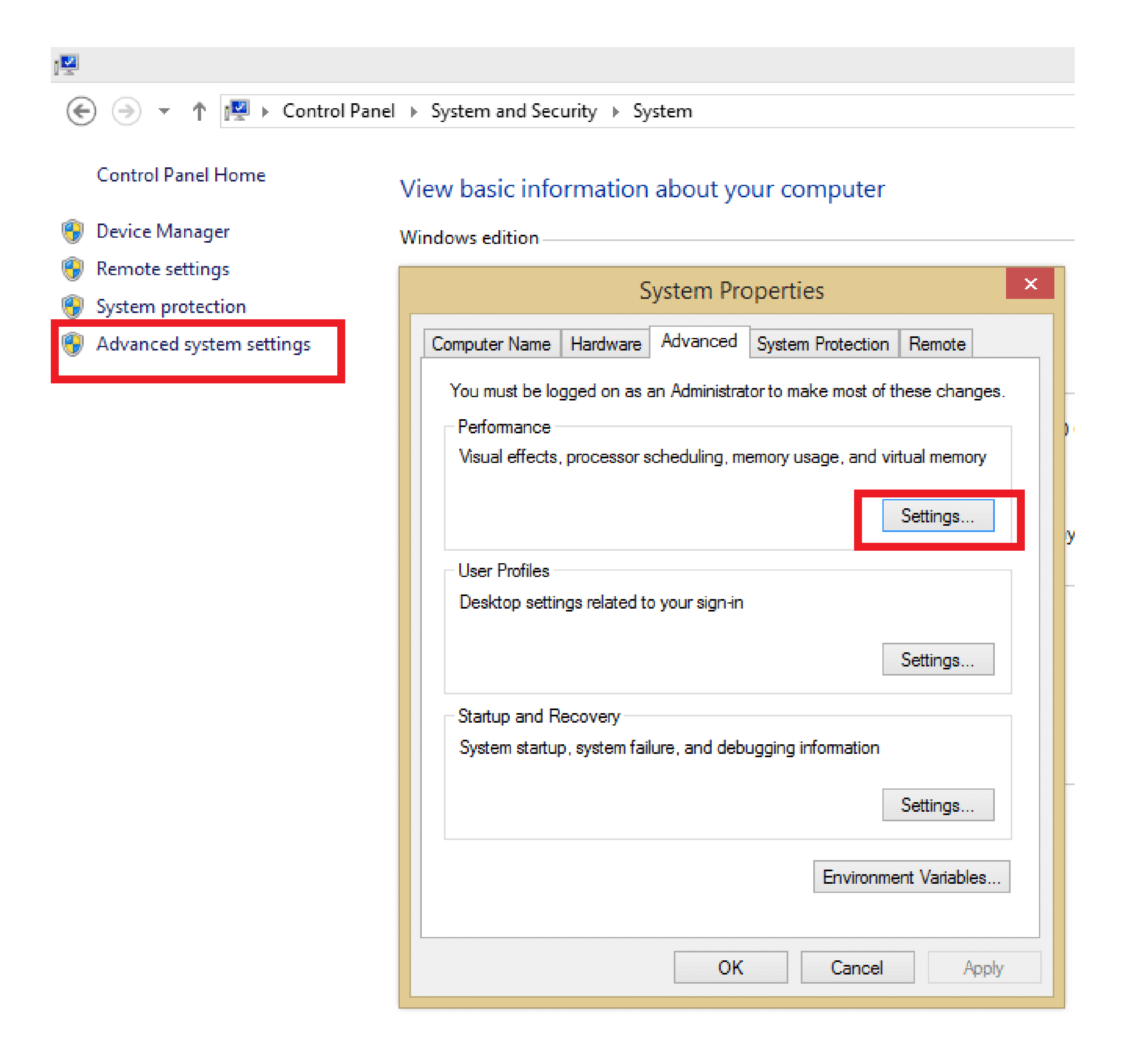
See also 8 Fixes For Can’t Change Brightness in Windows

Adjust for Best Performance on Windows 10:

Step 1- Open the Control Panel, navigate to **System and Security-> System.**

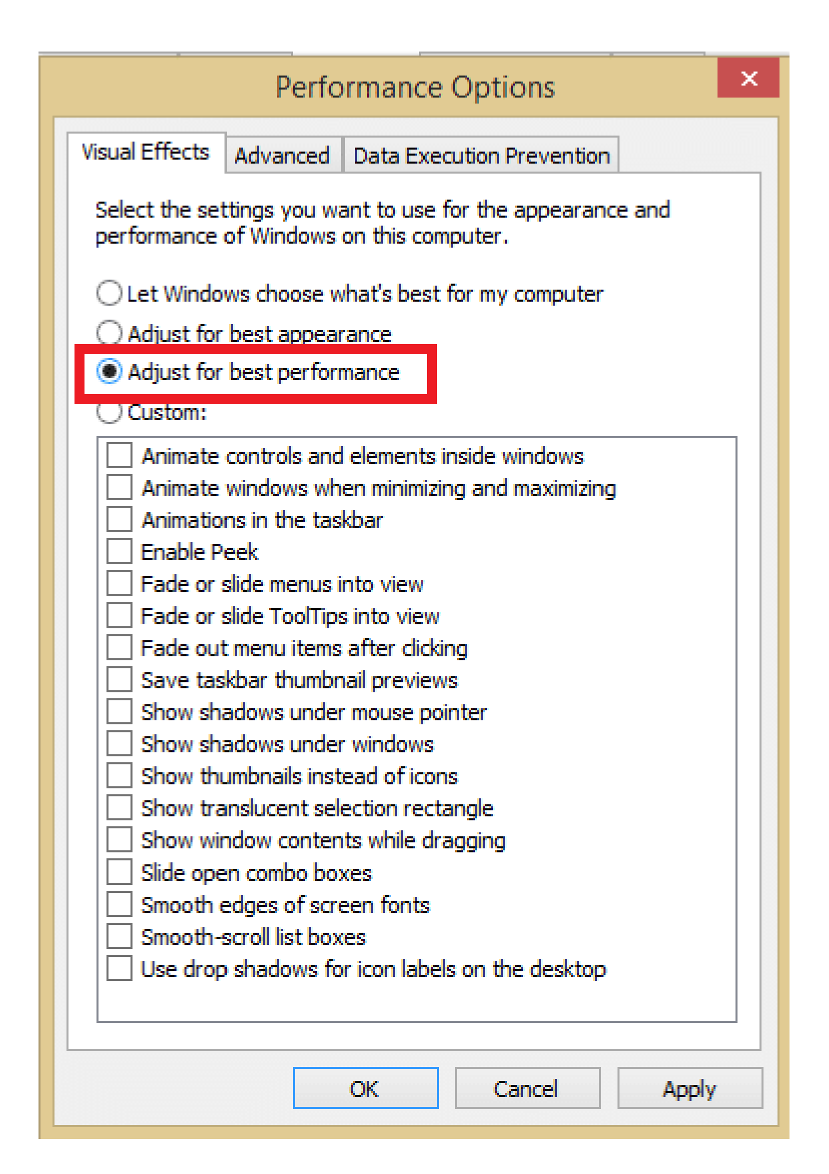


Step 2- Click on the "**Advanced system settings**" on the left side of the window.



Step 3- Under the "**Advanced**" tab, you can find the Performance box with a "**Settings"** button. Click on it.

Step 4- Check the option "**Adjust for best performance**". Click on "**Apply**" and then on the "**Ok**" button.

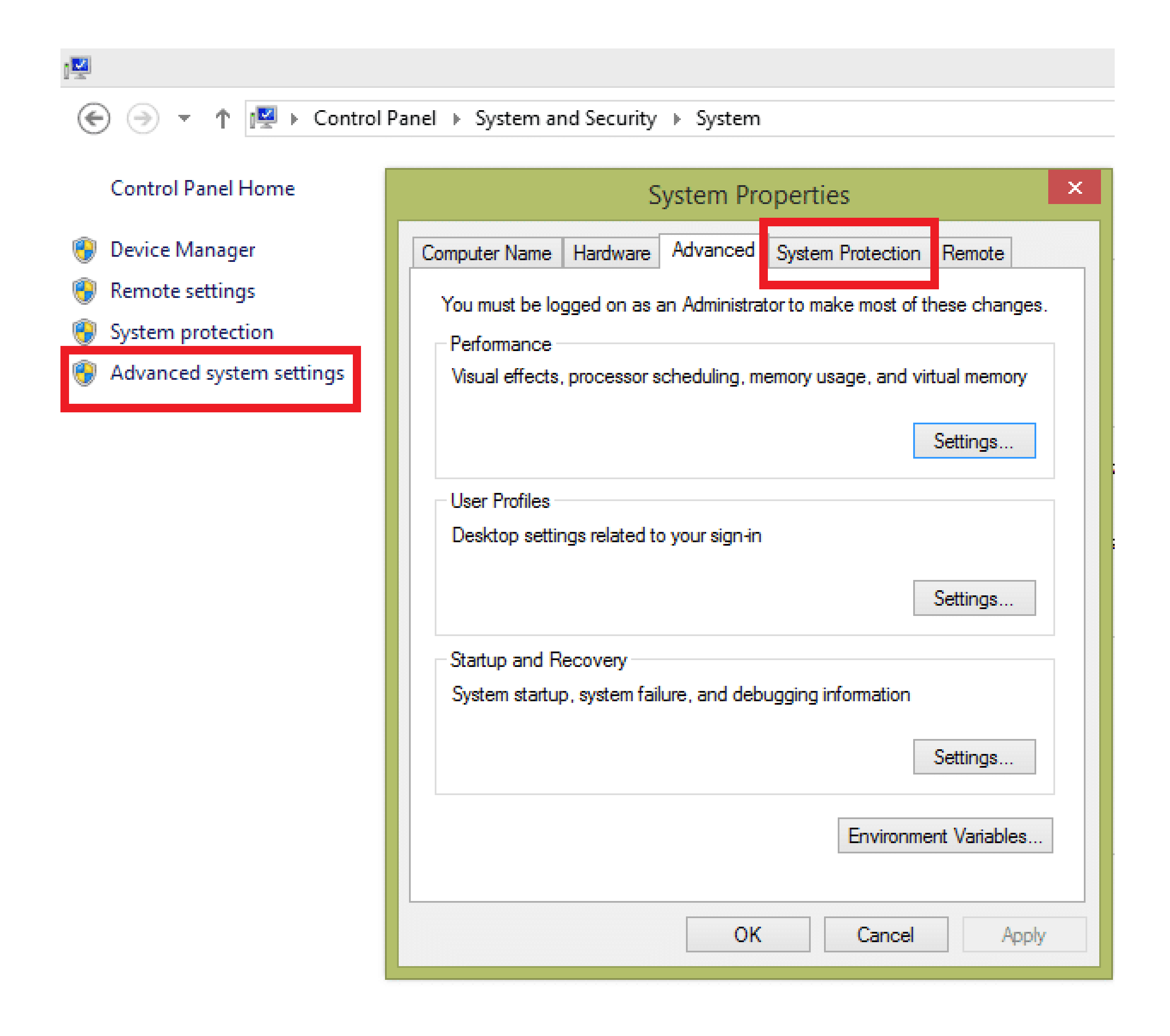


Method 4- Fix Disk File System Error Using “Advanced System Settings”

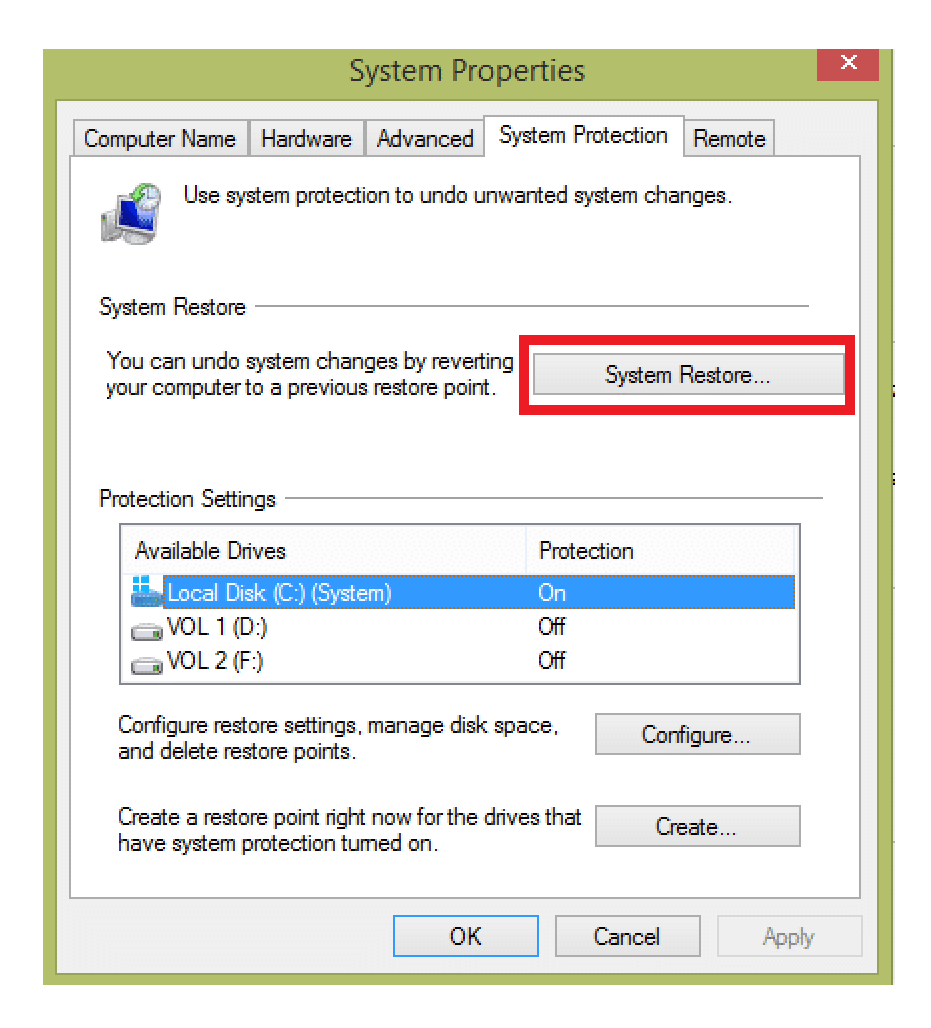
File system error occurs due to disk integrity corruption, bad sectors, corrupt files, file execution policies, etc. File system errors will prevent you from accessing files such as PDFs, images, documents, music videos, and much more. This error also leads to the high memory usage of your computer.

Using the System Restore built-in feature in Windows 10, the system can be restored to a certain point. Windows makes a restore point that can be used to restore your system.

Step 1- Open the Control Panel and navigate to System & Security-> Advanced system settings.



Step 2- Click on the “System Protection” tab.



Step 3- Select a Restore point from the previously saved restore points and complete the process by following the subsequent instructions.

Another way to solve the file system errors is by using professional partition manager software. Using this type of program can easily fix this error.

Method 5- Increase/Release Virtual Memory On Windows 10

There are instances when the data storage space of physical memory(RAM) is fully used or the version of memory you are using is too low so there is a shortage of memory/disk space available for further data storing and processing.

In this situation, Windows OS can use a separate space taken from secondary memory(HDDs/SSDs) to transfer some lower importance data from the physical memory and relieve some memory space for processing more important data.

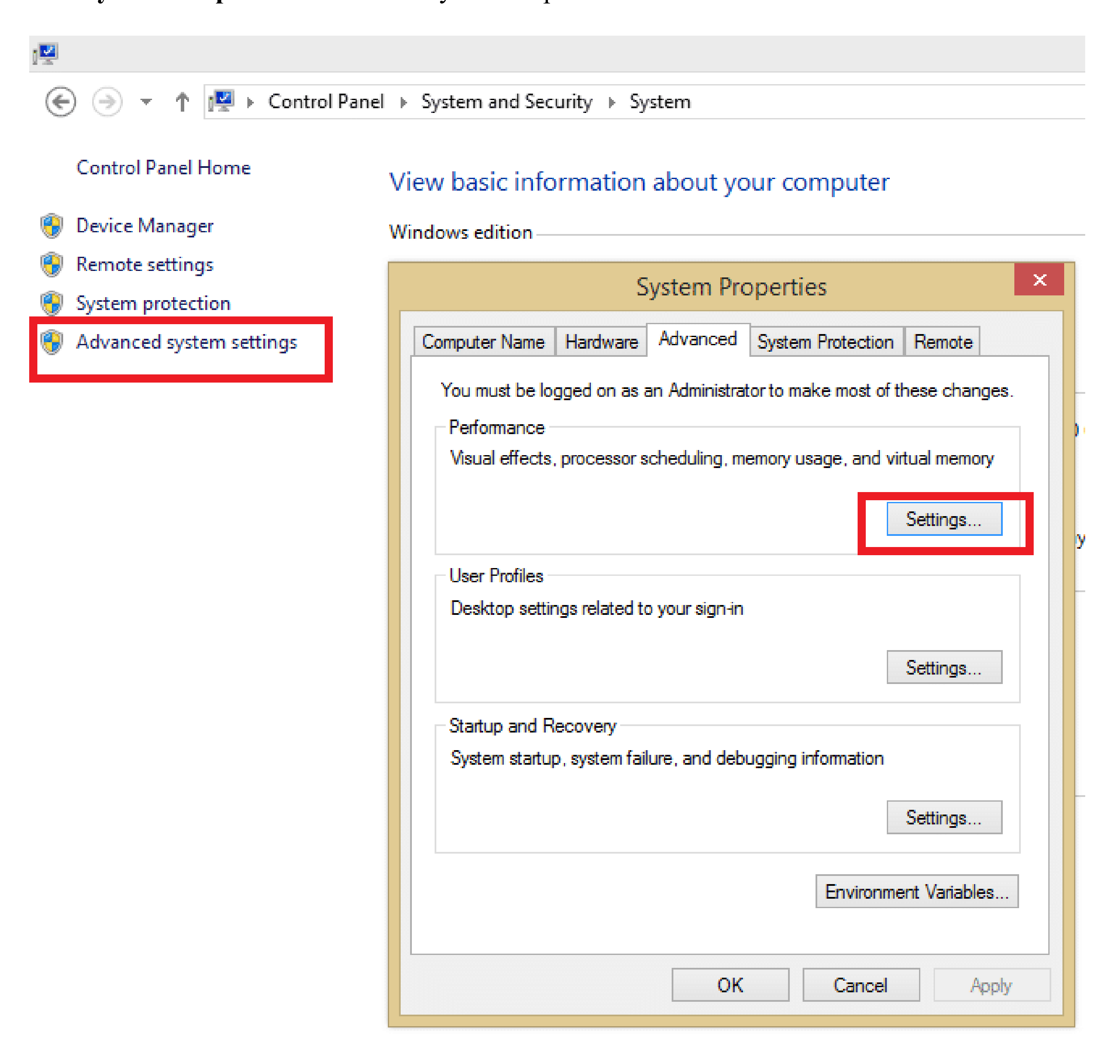
This separate space is called a paging file, and the feature of using the paging file is called Virtual memory. This process is done temporarily and is done by a combination of RAM and HDD. Increase virtual memory and will effectively reduce the high memory usage issue in your computer.

Sometimes computer users might be shown a prompt stating that the virtual memory is running low. In this case, you will need to either add another RAM or increase the size of the page file(also known as the **paging file**) of your computer. You can increase virtual memory in the System Properties window under the Advanced system settings in the control panel.

Step 1- Open the **Control Panel** on your Windows 10 computer.

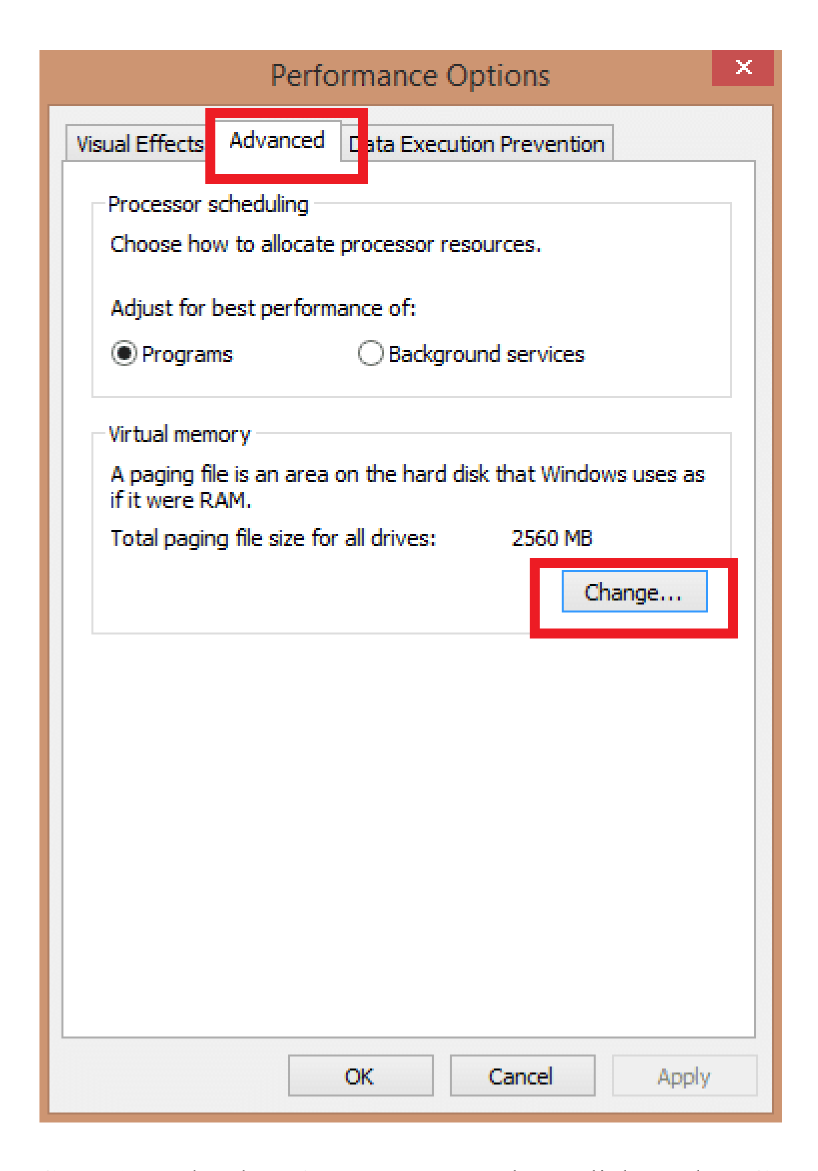
Step 2- Navigate to **System and Security-> System.**

Step 3- Click on the "**Advanced System Settings**" on the left side of the window. It will open the "**System Properties**" window of your computer.



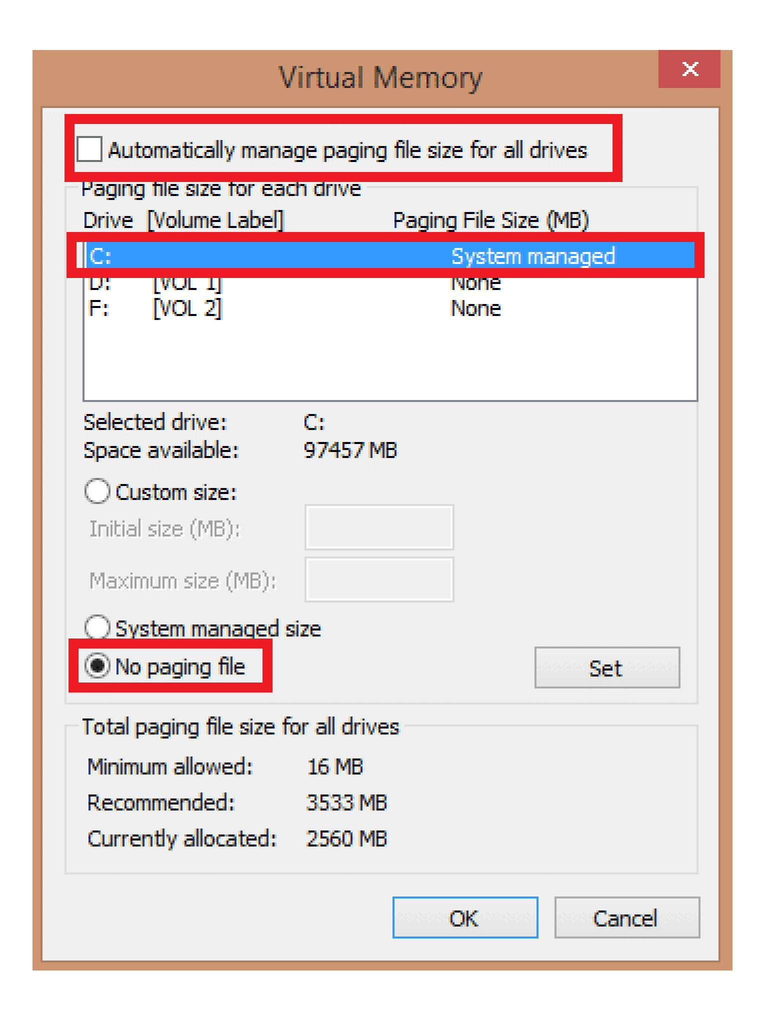
Step 4- Navigate to the "**Advanced**" tab, choose **Settings** in the Performance section.

Step 5- In the "**Performance Options**" window, go to the "**Advanced**" tab.



Step 6- Under the **Virtual Memory** box, click on the "**Change**" button.

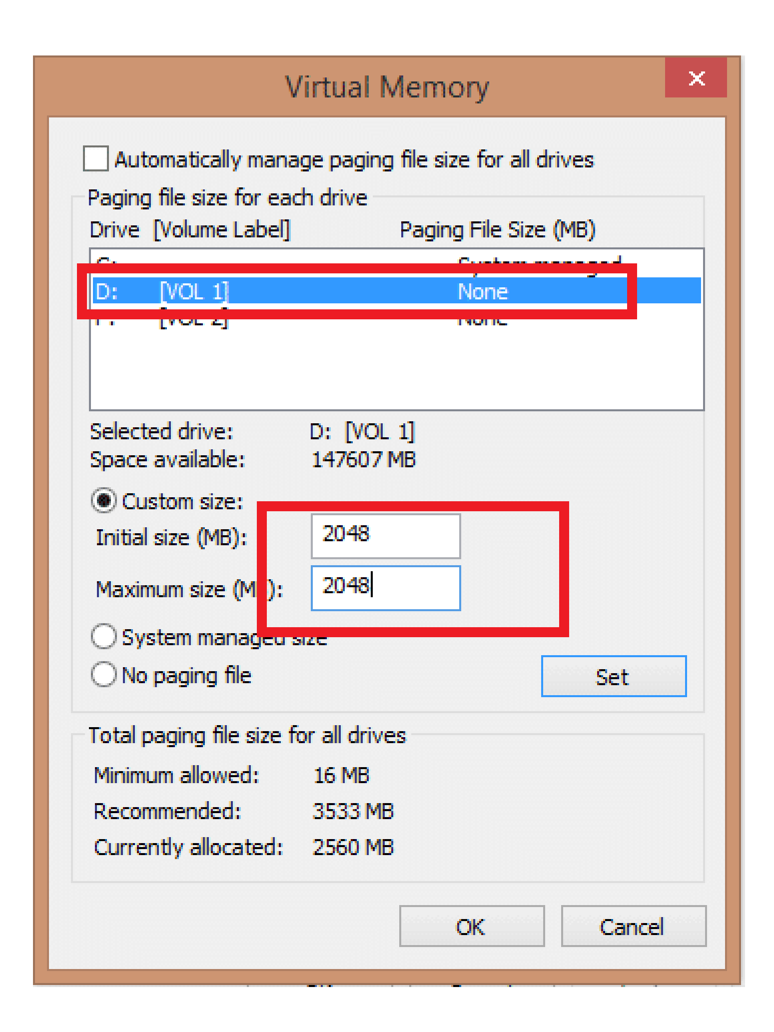
Step 7- Uncheck the box off "**Automatically manage paging file size for all drives**".



Step 8- Click on the C drive/system drive, select "**No paging file**" and click on "**Set**".

Step 9- Computer users will be shown a prompt with the "**Yes**" and "**No**" options. Click on "**Yes**".

Step 10- Now select a non-system drive. Click on the "**Custom size**" option and set the paging file size to the same value for both the "**Initial size**" and "**Maximum size**".



Note- Microsoft recommends that the size value of Virtual Memory can be set between 1.5 times and 3.0 times the size of the physical memory of a given computer. That is, the value can be no less than 1.5 times and no more than 3.0 times the size of the memory(RAM).

Step 11- Click on "**Set**" and then on "**Ok**" to save the changes you have made.

Method 6- Disable Superfetch Service On Windows 10

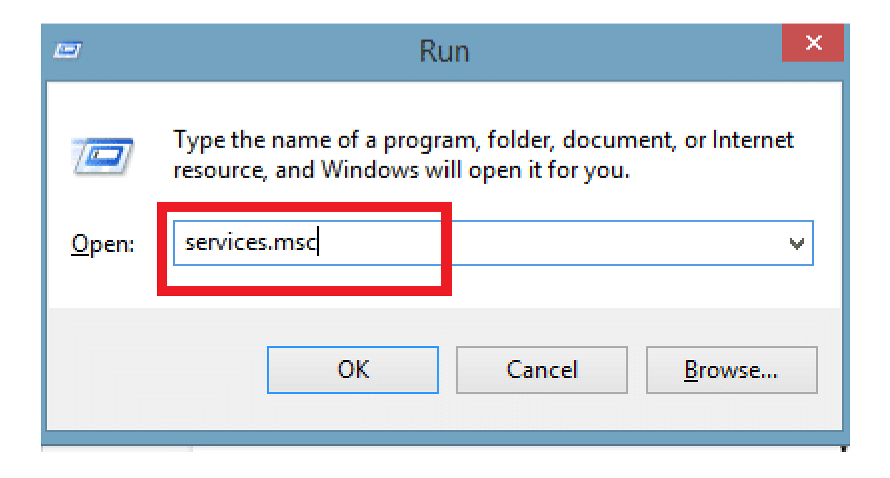
Superfetch service is an in-built Windows feature specifically used to make the response speed of a computer faster. It usually works by preloading the programs that you frequently use, so that there is no need to waste time on loading a particular program from the hard disk.

See also 12 Fixes For Print Screen Not Working on Windows

Disabling the Superfetch service can free up the RAM space that was previously preoccupied and ease up the pressure of high memory usage in your computer.

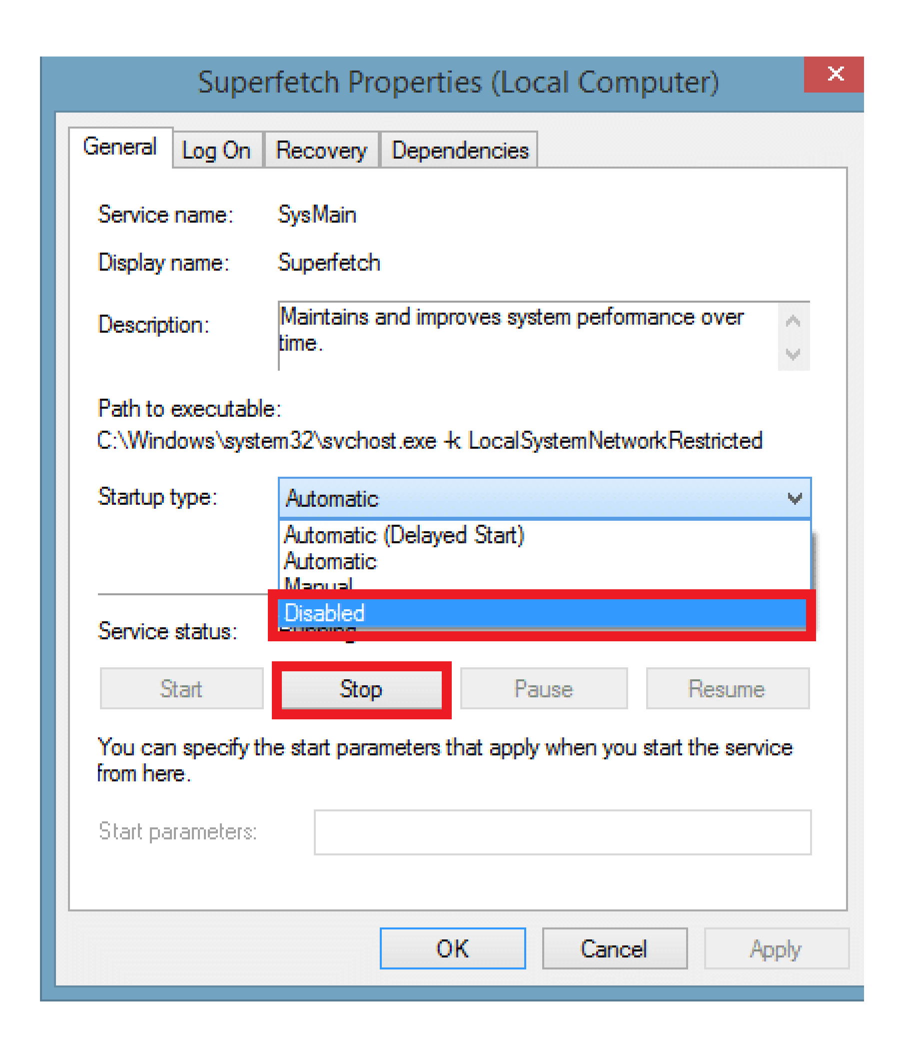
Step 1- Press **Windows + R** on the keyboard to open the Run dialog.

Step 2- Type "**services.msc**" and click on the Ok button.



Step 3- Find the "**Superfetch**" service from the list. Right-click on it and select the "**Properties**" option.

Step 4- Click on the "**Stop**" button. From the 'Startup type' roll-down menu select the "**Disabled**" option.

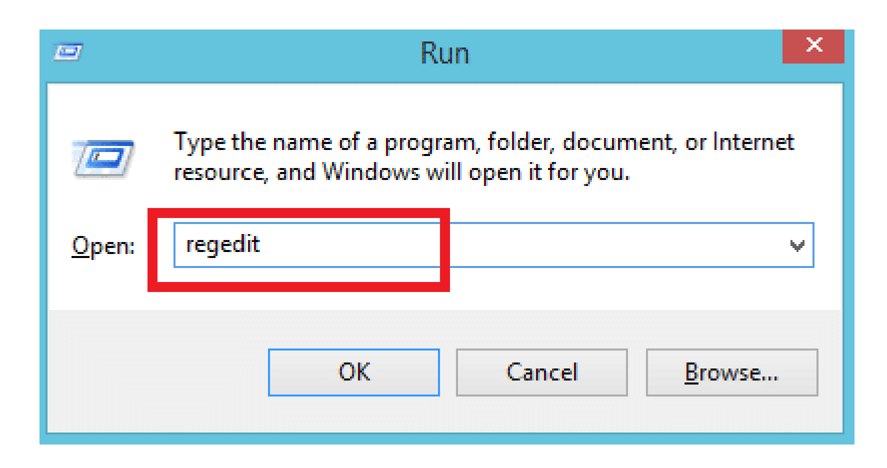


Step 5- Click on "**Apply**" and then on the "**Ok**" button for the setting to take effect.

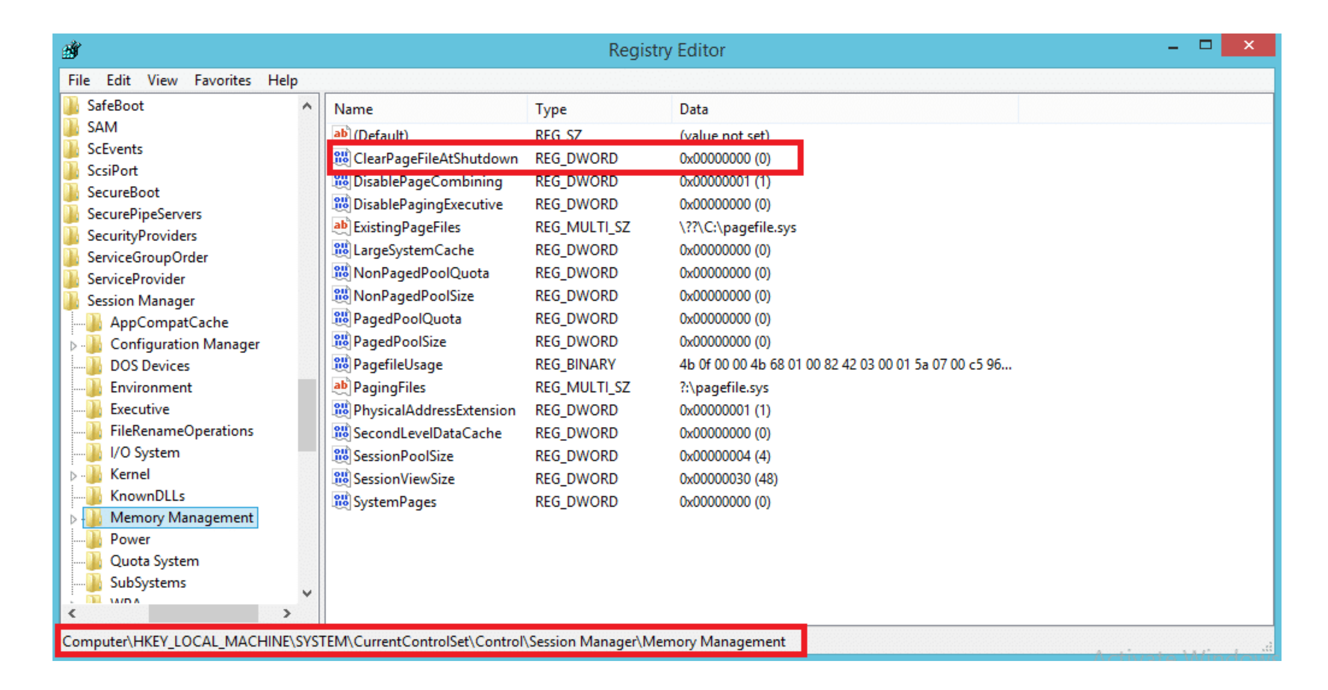
Method 7- Set Registry Hack On Windows 10

Step 1- Press **Windows** + **R** to open the Run dialog.

Step 2- Type in the keyword "**regedit**" and click "**Ok**". it will open the registry editor of your computer.

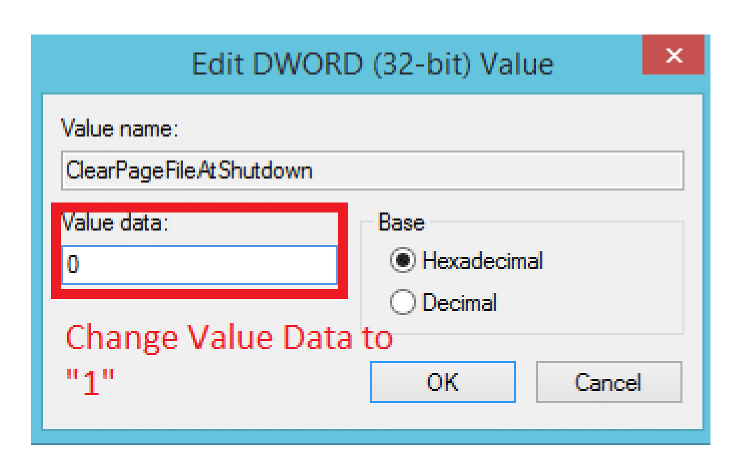


Step 3- Go to ***HKEY_LOCAL_MACHINE-> SYSTEM-> CurrentControlSet-> Control-> Session Manager-> Memory Management.***



Step 4- Right-click on the "**ClearPageFileAtShutdown**" and select "**Modify**".

Step 5- Change the Value Data from "0" to "1" and click "Ok".



Method 8- Increase Physical Memory On Windows 10

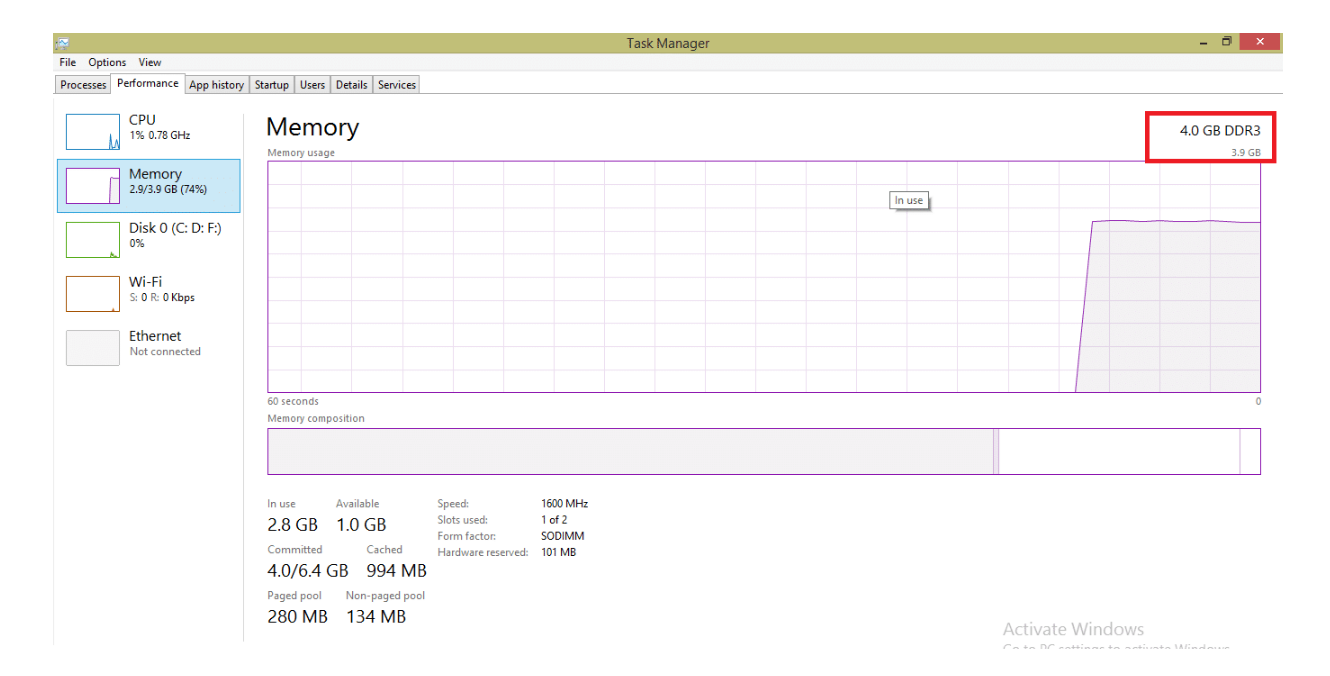
If your computer is facing a 'High Memory Usage" issue, then increasing the physical memory to alleviate the pressure of low memory space sounds logically correct.

To increase the memory, you first need to know the type of memory required according to the set parameters of your computer.

Step 1- Right-click on the Taskbar and select the Task Manager option.

Step 2- Under the **'Performance'** tab, click on the Memory section.

Step 3- Here check the speed and size of the existing memory card slot to decide upon the type of memory you are required to purchase. Now purchase a new memory card and install it into a free memory slot.



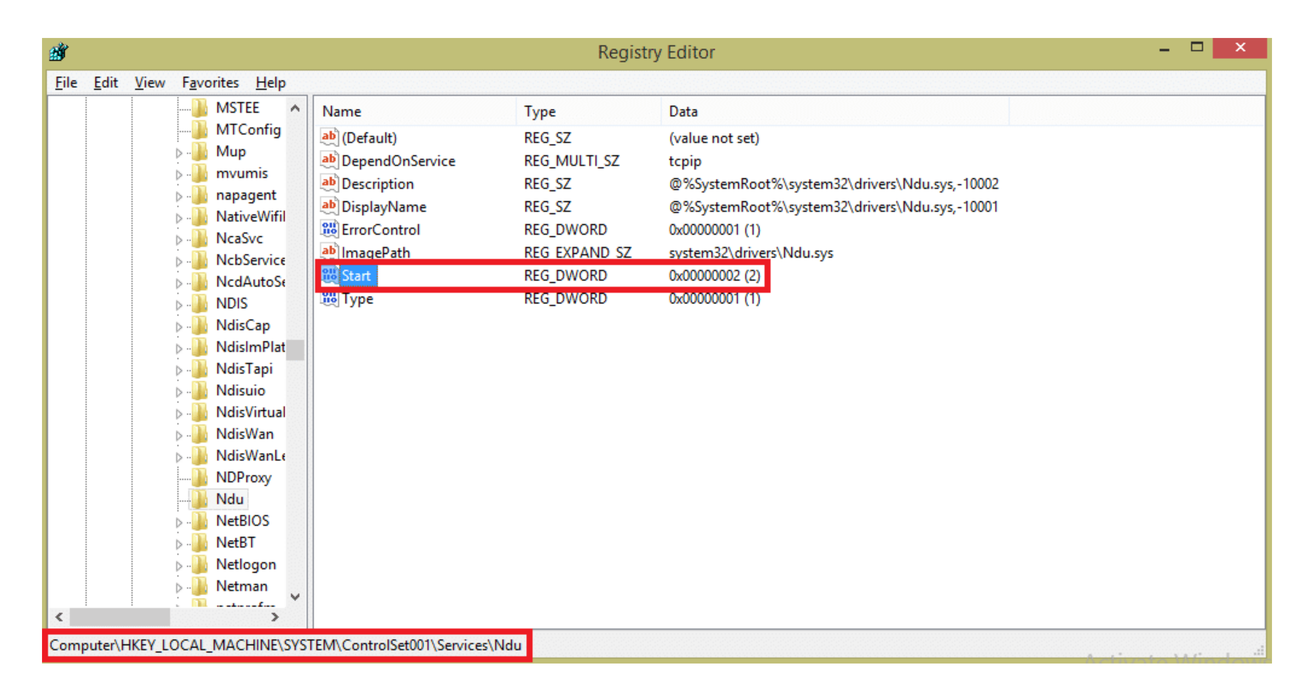
Step 4- Restart your computer and the system will automatically detect the new memory.

Method 9- Disable Ndu In Registry On Windows 10

You can disable NDU from the Registry Editor of your computer.

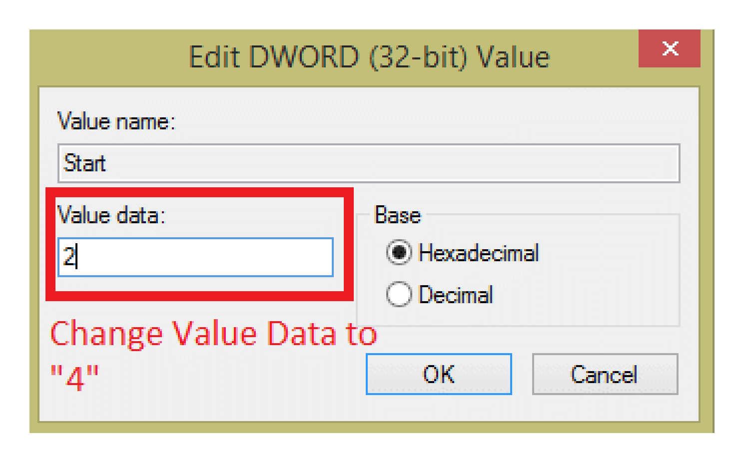
Step 1- Open the Run Dialog, type in the keyword "Regedit" and hit Enter.

Step 2- Navigate to ***HKEY_LOCAL_MACHINE-> SYSTEM-> ControlSet001-> Services-> Ndu.***



Step 3- Right-click on the "**Start**" REG_DWORD and click on the Modify option.

Step 4- Change the value from "2" to "4".



Method 10- Clean Up Virus On Your Windows 10

Another way to fix the high memory usage problem is to run a virus scan. Technically, virus infection or the presence of malware in your Windows 10 computer can lead to extensive usage of your memory. A good antivirus program can do this work perfectly.



Frequently Asked Questions

How do I fix the high memory usage problem in Windows 10?

A very common way to fix high memory usage is to close the unnecessary programs and startup apps of your windows 10 OS. If you are still facing the 'High memory usage' issue you can try other troubleshooting methods such as disabling Superfetch services, increase Virtual Memory or physical memory, defrag Hard drives, set registry hack, adjust for best performance, run an antivirus program etc.

Why is my memory usage suddenly so high?

'High memory usage' issue only occurs when your Windows 10/8/7 computer is running too many programs taking up much of the bulk of your memory(RAM) space, or some programs might have problems and don't release the data space previously assigned by the operating system after it is closed.

Why is my PC using so much memory?

RAM is used by the CPU for the fast processing of some important data. This is done temporarily i.e the unimportant data will be erased after processing. The reason why your PC is using so much memory is that the part of RAM space previously assigned to a particular

program is not returned after completing its operation leading to high memory usage in your computer.

Is 40% RAM usage normal?

There are lots of background programs and windows 10 services running all the time so that your computer operating system runs normally. In that case, it is quite stable for 40% RAM to be used by your computer.